

AMENDMENTS TO THE CLAIMS

1-47. (Cancelled)

48. (Currently Amended) A fluid treatment apparatus comprising:

~~An~~ an ultraviolet light source ~~comprising~~ including

an ultraviolet lamp;

a microwave energy source for exciting said ultraviolet lamp; and

a waveguide for guiding microwave energy originating from said microwave energy source to the ultraviolet lamp, said waveguide being UV transparent and wholly surrounding the ultraviolet lamp, wherein the waveguide is provided with a blocking end flange;
and

a housing for said ultraviolet light source, said housing having an inlet and an outlet, the housing shaped to guide flow of a fluid to be treated from the inlet, past the waveguide to the outlet.

49. (Currently Amended) The fluid treatment apparatus ~~ultraviolet light source~~ according to claim 48, wherein the ultraviolet lamp has no electrode.

50. (Currently Amended) The fluid treatment apparatus ~~ultraviolet light source~~ according to claim 49, further comprising an element or mixture of elements in vapor form.

51. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 50, wherein said element or mixture of elements comprises mercury, sodium, sulphur or mixtures of inert gases with mercury compounds.

52. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 49 having a dominant wavelength of 254nm.

53. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the waveguide controls the flow of microwave energy ~~from the enclosure~~.

54. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to either of claim 48, wherein the waveguide blocks the flow of microwave energy ~~from the enclosure~~.

55. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the enclosure comprises quartz or a UV-transparent plastic material.

56. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the waveguide comprises a conducting material.

57. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 56, wherein the waveguide comprises a conducting mesh.

58. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 57, wherein the conducting mesh comprises a material selected from the group consisting of copper, aluminum and stainless steel.

59. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the ultraviolet lamp has an elongated form.

60. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the transparent waveguide has a cylindrical or rectangular form.

61. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the ultraviolet lamp has an operating temperature of less than 70°C.

62. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the microwave energy source comprises a magnetron.

63. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, ~~additionally~~ further comprising a pathguide to guide the microwave energy from the microwave energy source to the ultraviolet lamp.

64. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 63, wherein the pathguide defines an essentially linear path.

65. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 63, wherein the pathguide defines a non-linear path.

66-67. (Cancelled)

68. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim ~~67~~65, wherein said fluid comprises water or air.

69. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim ~~67~~48, ~~additionally further~~ comprising a pump for pumping the fluid from the inlet, past the enclosure to the outlet.

70. (Currently Amended) The fluid treatment apparatus~~ultraviolet light source~~ according to claim 48, wherein the ultraviolet light source is for sterilising ~~a substance~~the fluid.

71. (Currently Amended) The ultraviolet light source according to claim 70, wherein ~~said substance~~the fluid is selected from the group consisting of water for human consumption; waste water; sewage; ~~metallic and non-metallic objects~~; and air.

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Page 6 of 11

72-80. (Cancelled)